

I CLAIM:

1. A method for inducing pressure changes in a mouth and throat cavity of a mammal comprising the steps of:

monitoring a respiration pattern of the mammal to determine a first time period during which the mammal is inhaling and a second time period during which the mammal is exhaling;

inducing at least a partial vacuum in the mammal's mouth and throat during the first time period; and

removing the at least partial vacuum during the second time period.

4/2. Apparatus for inducing pressure changes in a mouth and throat cavity of a mammal, the apparatus comprising:

a vacuum source having a controlled output;

an appliance in fluid communication with the controlled output of the vacuum source, the appliance adapted for placement in a mouth of a mammal so as to be in fluid communication therewith;

a sensor adapted to be coupled to a preselected portion of the mammal's anatomy and operative to generate a first signal whenever the mammal inhales and a second signal whenever the mammal exhales;

a controller having an output coupled to the controlled output of the vacuum source, and at least one input coupled for receipt of the first and second signals, the controller operative, upon receipt of the first signal, to cause the controlled output to pull at least a partial vacuum in the appliance, and the controller operative, upon receipt of the second signal, to cause the controlled output to cease pulling the at least partial vacuum.

53. The apparatus of Claim ~~2~~⁴ wherein the appliance comprises a conduit having a first end coupled to the controlled output of the vacuum source and a second end adapted for insertion into the mouth of the mammal.

~~4~~⁵. The apparatus of Claim ~~3~~⁵ wherein the appliance further comprises an appliance coupled to the second end of the conduit and shaped for receipt by the mouth of the mammal, the appliance including at least one opening enabling fluid communication between the conduit and at least a portion of the mouth.

~~7~~²⁶. The apparatus of Claim ~~4~~²⁶ wherein the appliance includes a plurality of openings arranged in a predetermined pattern, the plurality of openings enabling the fluid communication between the conduit and at least a portion of the mouth.

~~8~~⁴. The apparatus of Claim ~~2~~⁴ wherein the sensor comprises a variable electrical impedance element coupled to the mammal's anatomy in a manner such that the impedance element exhibits a first impedance value change whenever the mammal is inhaling and a second impedance value change whenever the mammal is exhaling.

~~9~~⁴⁸. The apparatus of Claim ~~6~~⁴⁸ wherein the sensor further comprises a belt having first and second ends, the belt adapted for placement around an abdominal cavity of the mammal, and wherein the variable electrical impedance element comprises a variable resistor having a fixed terminal coupled to the first end of the belt and a movable terminal coupled to the second end of the belt.

~~10~~⁹. The apparatus of Claim ~~7~~⁹ further comprising a return spring coupled between the fixed and movable terminals of the variable resistor.

11. Apparatus for inducing pressure changes in a mouth and throat cavity of a mammal, the apparatus comprising:

a regulated vacuum source having a controlled output;

5 a fluid switch having first, second and third ports, the first port coupled in fluid communication with the controlled output, and the second port coupled in fluid communication with ambient atmosphere;

an appliance in fluid communication with the third port of the fluid switch, the appliance adapted for placement in a mouth of a mammal so as to be in fluid communication therewith;

10 a sensor adapted to be coupled to a preselected portion of the mammal's anatomy and operative to generate a first signal whenever the mammal inhales and a second signal whenever the mammal exhales;

15 a controller having an output coupled to the fluid switch and having at least one input coupled for receipt of the first and second signals, the controller operative, upon receipt of the first signal, to cause the fluid switch to fluidly couple the first port to the third port, and the controller operative, upon receipt of the second signal, to cause the fluid switch to fluidly couple the second port to the third port.

2. The method of Claim 1 further comprising the step of inducing a positive pressure in the mammal's mouth during the second time period.

20 3. The method of Claim 1 wherein the step of removing includes applying atmospheric pressure in the mammal's mouth.

12. Apparatus for inducing pressure changes in a mouth and throat cavity of a mammal, the apparatus comprising:

a regulated vacuum source having a controlled vacuum output;

5 a regulated pressurized air source having a controlled pressurized air output;

a fluid switch having first, second and third ports, the first port coupled in fluid communication with the controlled vacuum output and the second port coupled in fluid communication with the pressurized air output;

10 an appliance in fluid communication with the third port of the fluid switch, the appliance adapted for placement in a mouth of a mammal so as to be in fluid communication therewith;

a sensor adapted to be coupled to a preselected portion of the mammal's anatomy and operative to generate a first signal whenever the mammal inhales and a second signal whenever the mammal exhales;

15 a controller having an output coupled to the fluid switch and having at least one input coupled for receipt of the first and second signals, the controller operative, upon receipt of the first signal, to cause the fluid switch to fluidly couple the first port to the third port, and the controller operative, upon receipt of the second signal, to cause the fluid switch to fluidly couple the second port to the third port.
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